

ABSTRACT

A method and apparatus for dynamically detecting write fault errors is provided. According to the invention, transducer head control parameters are adjusted according to observed events. For instance, off-track events of a certain magnitude may trigger the implementation of a severe shock timer, which lengthens the delay between the off-track event and allowing write operations to resume, as compared to the standard off-track timer. According to another embodiment of the present invention, a lower write fault threshold is implemented following an off-track event of sufficient magnitude. According to yet another embodiment of the present invention, the average or accumulated position error of the transducer head is monitored, and a lower write fault threshold implemented if the average position error exceeds a threshold value. The present invention's provision of a method and apparatus that enables transducer head control parameters to be modified in response to observed off-track events allows the disk drive to provide high resistance to data loss without significant detrimental effects on the data throughput performance of the disk drive.